



# OSHA Methods for Analysis Using ZORBAX HPLC Columns

## Application

## Technical

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The following is a list from the OSHA Web Site, [www.osha-slc.gov/](http://www.osha-slc.gov/), under 'Chemical Sampling Information', describing standard methods for analysis of many compounds using ZORBAX HPLC columns.

**Aldicarb** CAS#116-06-3 [Temik]; ZORBAX ODS; Mobile Phase: 55% MeOH, 45% Water  
DL 9 ng/Inj, 1mL/min, RT=9 min, Ambient, Detect. UV (254, 229)

**1,1'-Azobisformamide** CAS#123-77-3 [Celogen AZ; Azodicarbonamide;  
Diazenedicarboxamide; Kempore; Genitron; Unifoam; Nitropore; Porofoor]; ZORBAX CN;  
Mobile Phase: 77% Hexane, 7% Isopropanol, 16% MeOH; DL 14 ng/Inj, 1.5mL/min,  
RT=6.9 min, Ambient, Detect. UV (276, 254)

**Bronkosol** CAS#50-96-4 [Isotharine; Asthmalitan; Numotac]; ZORBAX C8; Mobile Phase:  
75% ACN, 25% Water, di-n-butylamine, H<sub>3</sub>PO<sub>4</sub>; pH 5; 1mL/min, Ambient, Detect. UV (280)

**Brucine** CAS#357-57-3 [Brucin; Brucina; Dimethoxystrychnine]; ZORBAX ODS; Mobile  
Phase: MeOH/Water (90/9), 1% n-Amyl alcohol, 5mM Heptanesulfonate, pH 3.5; 1mL/min,  
RT=5.8 min, Ambient, Detect. UV (265)

**Carbaryl** CAS#63-25-2 [1-Naphthyl N-methyl-carbamate;  $\alpha$ -Naphthyl N-methyl-carbamate,  
Sevin]; ZORBAX ODS; Mobile Phase: 55% ACN, 45% Water, 1mL/min, Ambient, RT=6.5 min,  
Detect. UV (280)

**p-Chlorophenol** CAS#106-48-9 [4 Chlorophenol]; ZORBAX ODS; Mobile Phase: 60% MeOH,  
40% Water, 0.1% H<sub>3</sub>PO<sub>4</sub>; DL 0.7  $\mu$ g/sample, 1mL/min, Ambient, Detect. UV (280, 254)

**5-Fluorouracil** CAS#51-21-8 [Aducil; Efudex; Fluoroplex; 5-Fluoropyrimidine-2,4-dione;  
Fluorouracil; FU; 5-FU]; ZORBAX NH<sub>2</sub>; Mobile Phase: 40% Hexane, 10% Isopropanol, 50%  
MeOH; DL 0.5 ng/Inj, 1.5mL/min, Ambient, RT=4.9 min, Detect. UV (266, 254)

**Gentian Violet** CAS#548-62-9 [Hexamethyl-p-Rosaniline Cl; Crystal Violet]; ZORBAX CN;  
Mobile Phase: 85% MeOH, 15% Water, 80mM Heptanesulfonic acid (pH 3.5 with H<sub>3</sub>PO<sub>4</sub>); DL  
4.5 ng/Inj, RT=8.3 min, Ambient, Detect. (588, 300)

**HMX** CAS#2691-41-0 [Cyclotetramethylenetranitramine; Octogen, HW4; LX 14-0]; ZORBAX  
ODS; Mobile Phase: 40% ACN, 60% Water; DL 10.5 ng/Inj, 1mL/min, RT=11.1 min, Ambient,  
Detect. UV (235, 225)

**Isophthalic Acid** CAS#121-91-5 [IPA]; ZORBAX ODS; Mobile Phase: 50% MeOH, 50%  
Water; 1mL/min, RT= 4-5 min, Ambient, Detect. UV (215, 254)



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**Isopropyl m-Chlorocarbanilate** CAS#101-21-3 [Chlorpropham; (3-Chlorophenyl) carbamic acid; 1-Methylethyl ester; Furloe; Chloro-IPC; Isopropyl N-(3-chlorophenyl) carbamate; Spud-Nic; Taterpex; CIPC; Isopropyl 3-chlorocarbanilate; m-Chlorocarbanilic Acid, Isopropyl Ester; Beet-Keen; Sprout Nip]; ZORBAX NH<sub>2</sub>; Mobile Phase: 85% Isooctane, 10% Isopropanol, 5% MeOH; DL 6.5 ng/Inj, 1mL/min, RT=6 min, Ambient, Detect. UV (249, 278)

**Lasso** CAS#15972-60-8 [2-Chloro-N-(2,6-Diethylphenyl) N-(methoxymethyl) Acetamide; Alachlor; Alamex; Alochlor; CP50144; Metachlor; Methachlor ]; ZORBAX ODS; Mobile Phase: 60% ACN, 40% Water; DL 1.5 ng/Inj, 1.1mL/min, RT=12.4 min, Ambient, Detect. UV (254, 214)

**Machette** CAS#23184-66-9 [N-(Butoxymethyl)-2-chloro-N-(2,6-diethylphenyl)acetamide; Butachlor; Machete ]; ZORBAX ODS; Mobile Phase: 80% ACN, 20% Water; 1.1mL/min, Ambient, RT=11 min, Detect. UV (214, 254)

**Methyl Isocyanate** CAS#624-83-9 [MIC; Isocyanatomethane]; ZORBAX CN; Mobile Phase: 20-25% ACN, 75-80% Water+1.54g/L NH<sub>4</sub>Ac (pH to 5.1-6.5 with HOAc; DL 0.15 ng/Inj, 1mL/min, RT=5.5-11 min, Ambient, Detect. UV (254), (ex=240, ex=370)

**Resmethrin** CAS#10453-86-8 [Dimethyl 3-(2-Methyl-1-Propenyl)cyclopropanecarboxylate; Benzofuroline; Chryson]; ZORBAX ODS (4.6 x 250mm, 5 µm) (P/N:880952-702); Mobile Phase: 75% ACN, 25% Water; DL 10.1 ng/Inj, 1.5mL/min, RT=5.7 min, Ambient, Detect. UV (233)

**Rosaniline** CAS#632-99-5 [Basic para fuchsine; Calcozine Magenta N; CI 42500; p Fuchsine; Fuchsine; DR-001; Fuchshin SP; Fuchsine SPC; Pararosanine; NCI-C-54739; Paramagenta; Magenta ]; ZORBAX CN; Mobile Phase: 50% MeOH, 50% Water, 0.1% H<sub>3</sub>PO<sub>4</sub> 2mL/min, RT=15 min, Ambient, Detect. (546 nm)

**Simazine** CAS#122-34-9 [Aquazine; Batazina; Herbazin; Taphazine; Zeapur; Princep; Printop; 2-Chloro-4,6-Bis(Ethylamino)-s-Triazine; CAT; CDT; Simadex; Simanex; 2-Chloro-4,6-Bis(Ethylamino)-1,3,5-Triazine; 1-Chloro-3,5-Bisethylamino-2,4,6-Triazine ]; ZORBAX ODS; Mobile Phase: 70% MeOH, 30% Water; DL 15 ng/Inj, 1mL/min, RT=6.6 min, Ambient, Detect. UV (254, 280)

**Sulfadiazine** CAS#68-35-9; ZORBAX C8; Mobile Phase: 15% ACN, 85% Water, 0.1% H<sub>3</sub>PO<sub>4</sub> DL 6 µg/sample, 1.5mL/min, RT=9 min, Ambient, Detect. UV (230)

**Sulfapyridine** CAS#144-83-2; ZORBAX C8; Mobile Phase: 15% ACN, 85% Water, 0.1% H<sub>3</sub>PO<sub>4</sub>; DL 7 µg/sample, RT=8 min, Ambient, Detect. UV (230)

**Thioglycolic Acid** CAS#68-11-1 [Mercaptoacetic Acid; Thiovanic Acid]; ZORBAX C18; Mobile Phase: 10% MeOH, 90% Water, 0.1% H<sub>3</sub>PO<sub>4</sub>; DL 2 µg/sample, 1mL/min, Ambient, Detect. UV (240)

**Thiophanate** CAS#23564-06-9 [Cercobin; Topsin; Nematax; 1,2-bis(3-Ethoxycarbonyl-2-thioureido)benzene ]; ZORBAX NH<sub>2</sub>; Mobile Phase: 70% Isooctane, 10% Isopropanol, 20% MeOH; DL 45 ng/Inj, 1mL/min, RT=7.1; Ambient, Detect. UV (229, 267)

**Vydate** CAS#23135-22-0 [2-(Dimethylamino)-N-[(methylamino)carbonyl]oxy]-2-oxoethanoimido- thioic acid methyl ester; Oxamyl; Thioxamyl ]; ZORBAX ODS; Mobile Phase: 45% ACN, 55% Water; DL 0.2 µg/sample, 1mL/min, RT=2.6 min; Ambient, Detect. UV (214)

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